

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 04 Aug 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

D5-Epichlorohydrin

1.1. Catalog No.:

691231

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 2), H225
Eye irritation (Category 2), H319
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

2.2. Label elements

2.2.1. Pictogram



2.2.2.

Signal word Danger
Hazard statement(s)
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370 + P378 In case of fire: Use dry powder or dry sand to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

Supplemental Hazard information (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : C₃H₆O

Molecular Weight : 58,08 g/mol

CAS-No. : 67-64-1

EC-No. : 200-662-2

Index-No. : 606-001-00-8

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Acetone

CAS-No.

EC-No.

Index-No.

67-64-1

200-662-2

606-001-00-8

Flam. Liq. 2; Eye Irrit. 2; STOT

SE 3; H225, H319, H336

<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

Acetone

CAS-No.

EC-No.

Index-No.

67-64-1

200-662-2

606-001-00-8

F, Xi, R11 - R36 - R66 - R67 <= 100 %

3.1.1. Formula

C₃H₆O

3.1.2. Molecular Weight (g/mol)

97.56

3.1.3. CAS-No.

69533-54-6

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid, clear
Colour: colourless
 - b) Odour no data available
 - c) Odour Threshold no data available
 - d) pH no data available
 - e) Melting point/freezingpoint
Melting point/range: -94 °C
 - f) Initial boiling point and boiling range 56 °C
at 1.013 hPa
 - g) Flash point -17,0 °C - closed cup
 - h) Evaporation rate no data available
 - i) Flammability (solid, gas) no data available
 - j) Upper/lower flammability or explosive limits
Upper explosion limit: 13 %(V)
Lower explosion limit: 2 %(V)
 - k) Vapour pressure 533,3 hPa at 39,5 °C 245,3 hPa
at 20,0 °C
 - l) Vapour density no data available
 - m) Relative density 0,791 g/mL at 25 °C
 - n) Water solubility completely miscible
 - o) Partition coefficient: noctanol/water
log Pow: -0,24
 - p) Auto-ignition temperature 465,0 °C
 - q) Decomposition temperature no data available
 - r) Viscosity no data available
 - s) Explosive properties no data available
 - t) Oxidizing properties no data available
- ### 9.2 Other safety information
- Surface tension 23,2 mN/m at 20,0 °C

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
no data available
- 10.2 Chemical stability
no data available
- 10.3 Possibility of hazardous reactions
no data available
- 10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials
Strong oxidizing agents
- 10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 5,800 mg/kg(Acetone)
Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Tremor.
Behavioral:Headache. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
LC50 Inhalation - Rat - 8 h - 50,100 mg/m3(Acetone)
Remarks: Drowsiness Dizziness Unconsciousness
LD50 Dermal - Guinea pig - 7,426 mg/kg(Acetone)
Skin corrosion/irritation
Skin - Rabbit(Acetone)

Result: Mild skin irritation - 24 h
Serious eye damage/eye irritation
Eyes - Rabbit(Acetone)
Result: Eye irritation - 24 h
Respiratory or skin sensitisation
- Guinea pig(Acetone)
Result: Does not cause skin sensitisation.
Germ cell mutagenicity
No data available(Acetone)
Carcinogenicity
This product is or contains a component that is not classifiable as to its classification.(Acetone)
(Acetone)
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
No data available(Acetone)
Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.(Acetone)
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available(Acetone)
Additional Information
RTECS: Not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Acetone)
Kidney - Irregularities - Based on Human Evidence(Acetone)
Skin - Dermatitis - Based on Human Evidence(Acetone)

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 5,540 mg/l - 96 h(Acetone)
Toxicity to daphnia and other aquatic invertebrates
LC50 - Daphnia magna (Water flea) - 8,800 mg/l - 48 h(Acetone)
Toxicity to algae Remarks: No data available
12.2 Persistence and degradability
Biodegradability Result: 91 % - Readily biodegradable.
(OECD Test Guideline 301B)
12.3 Bioaccumulative potential
Does not bioaccumulate.
12.4 Mobility in soil
No data available(Acetone)
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 1090 IMDG: 1090 IATA: 1090
14.2 UN proper shipping name
ADR/RID: ACETONE
IMDG: ACETONE
IATA: Acetone
14.3 Transport hazard class(es)
ADR/RID: 3 IMDG: 3 IATA: 3
14.4 Packaging group
ADR/RID: II IMDG: II IATA: II
14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.
The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!